7-16-2019

Expanding Instream Flows to Protect Ecosystems in Overallocated River Basins

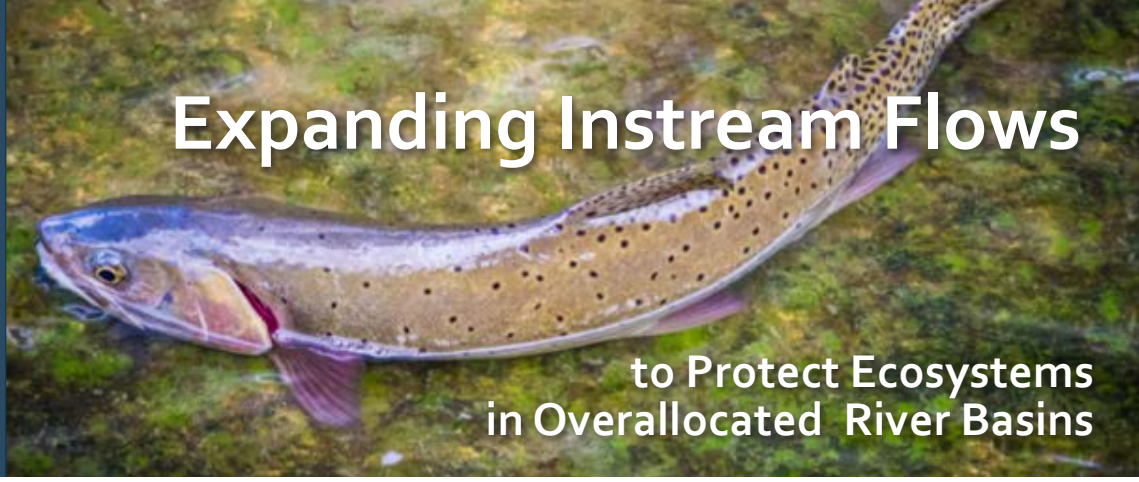
Belize Lane
Utah State University, belize.lane@usu.edu

David E. Rosenberg
Utah State University, david.rosenberg@usu.edu

UtahStateUniversity
UTAH WATER RESEARCH LABORATORY

Belize Lane &
David E. Rosenberg

July 2019



Expanding Instream Flows to Protect Ecosystems in Overallocated River Basins

INSTREAM FLOW PROJECTS IN UTAH

Approved:

- 8 formal acquisitions by DWR since 1986, 100 cfs
- Lower Weber River, 1.49 cfs or 485 acre-feet (TU HB 117)
- South Fork Little Bear River, .285 cfs or 86 acre-feet (TU HB 117)

Pending:

- Carter Creek (TU)
- Informal 1-2 year water transactions, ~2000 acre-feet in 2017 (DWR)
- Ogden River, ~1 cfs from Dinsdale Irrigation Co (DWR, TU HB 117)
- Blacksmith Fork River, ~1 cfs from Nibley City (USU, TU)

Potential:

- Little Bear River below Hyrum Reservoir
- Bear River below Cutler Reservoir
- Many other locations...

SUMMARY

- Utahns want to promote and maintain instream flows.
- Instream flows will benefit Utah's major outdoor recreation and tourism industry, protect the state's natural resources, and support aquatic species populations.
- Instream flow tools are already allowed under current Utah water law but require more extensive testing and use, including water conservation, acquisition by DWR, split-season leases, and water banking.
- Instream flows can be bolstered substatially by allowing more entities to participate, expanding the allowable purposes, extending the expiration date for the law (HB 117), and allowing permanent transfers.

Introduction

Utahns are expressing a rapidly growing interest in protecting and enhancing instream flows for outdoor recreation and environmental benefits (Endter-Wada et al. 2015). However, many Utah rivers are already over-allocated for agricultural, municipal, hydropower and other water uses, making it difficult to procure additional water for instream flows. 'Use it or lose it' western water law and mentality encourages Utahns to use water rather than return it to rivers and ecosystems.

This briefing reviews existing instream flow practices allowed by the Utah water rights system and the challenges to implementation. We suggest key technical and legislative opportunities within and outside the existing system to promote instream flows.

Existing instream flow tools and challenges

Under Utah water law, the Division of Wildlife Resources (DWR) can acquire water for the "propogation of fish, public recreation, and preservation of the natural stream environment." A subsequent amendment allows non-profits that promote fishing in Utah to file temporary instream water rights applications to protect native trout habitat (73-3-30, 2013). Since 1986, DWR has acquired 8 instream flow rights (100 cfs) (Szeptycki et al. 2015) and Trout Unlimited (TU) has acquired 2 temporary rights (1.8 cfs, 571 acre-feet) (see left sidebar for full list). Very limited implementation of these laws is due to limitations on allowable participants and the significant time and effort needed to set up a lease (pg. 2 right sidebar). As a result, many allowable instream flow protection mechanisms have yet to be tested either legally or with the Utah State Engineer.

Working within the existing Utah water rights system

Five promising tools can work within the existing Utah water rights system to promote instream flows. These tools overcome two key challenges: (1) acquiring a water source, either through existing water rights (leased, donated, or sold) or unappropriated water, and (2) shepherding water from the source to the instream use location while preventing intermediary users from filing on or diverting the water.

1. **Incentivize water conservation** ***(source)*** **-** An instream flow lessor encourages a water rights holder to conserve water. Then conserved (undiverted) water remains instream until the next downstream point of diversion. Water savings can occur through efficient irrigation technology, metering, secondary water use, irrigation scheduling, or rate changes. This tool could be augmented through voluntary landowner incentive programs.

Expanding Instream Flows

2. **DWR Acquisitions** ***(source and shepherding)*** **-** DWR and the Department of Recreation can acquire (by donation, lease, or exchange) temporary or permanent water rights for instream uses.

3. **Federal Energy Regulatory Commission (FERC) Relicensing** ***(source and shepherding)*** **-** Over 24 hydroelectric facilities in Utah require a FERC license to operate. Instream flow releases can be a condition for relicensing. Public input is part of the relicensing process, and timing is critical as licenses may last up to 40 years. The process can be protracted, expensive, and highly contentious.

4. **Split-season irrigation** ***(source)*** **-** In late summer an irrigator foregoes use of their water right and leaves that water in-stream. Typically, the instream flow lessor compensates the irrigator for the foregone late-season crop, which may be a 3rd or 4th cutting of alfalfa. Split-season leases can proceed if the State Engineer's Office interprets existing law to allow a water user to have multiple uses per season (e.g., irrigation and instream).

5. **Water banking** ***(source and shepherding)*** **-** A water rights holder deposits their right into the water bank, which protects against forfeiture. Then another entity (e.g., DWR, TU) purchases or leases deposited rights from the bank for instream uses. The bank facilitates short-term instream water transfers and provides protection to shepherd instream water. Idaho has processed 30+ instream transfers through a statewide water banking system (Szeptycki et al. 2015).

Changing existing Utah water rights law

Additional measures can modify and make permanent existing water rights law to promote instream flows while protecting existing agricultural users.

Expand HB 117 to—

- **allow more entities to participate.** Currently, instream water source identification and shepherding require DWR or TU be involved. Expand the entities that can participate to allow conservancy districts, local irrigation districts, water user associations, municipalities, individual water rights holders, and NGOs. More participating entities will offer more opportunities for partnerships, collaborations, and bottom-up alliances for instream flows.

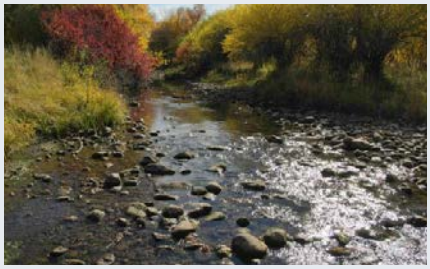
- **allow more instream purposes.** Currently, allowed instream purposes focus on creating native trout habitat. Expand allowable instream purposes to include other ecological endpoints such as aquatic and riparian species and habitat. Expanding the purposes will likely encourage more holistic approaches to maintaining river ecosystem health including more ecological benefits per unit of instream water.

- **allow water users multiple uses per season.** Current law is silent on whether water users can have multiple uses per season and the State Engineer's Office has traditionally allowed only a single use. Modifying the statute to recognize multiple uses per season would allow split-season leases and other mechanisms that simultaneously promote instream, agricultural and possibly other uses.

- **allow permanent transfers.** Permanent protection of undiverted water rights for instream flows would greatly encourage water conservation and provide a critical additional water source for instream uses. Allow permanent transfers of undiverted water rights to permitted entities in cases with clear biological need for instream water.

Expand HB 58 to allow more entities to participate. Currently, only the DWR and Parks & Recreation can acquire water rights for instream flows under HB 58. Expand the state entities that can participate. Further, explicitly specifying the entities' ability to shepherd instream water past diversions would reduce transaction costs (time and resources) and encourage more instream water rights transfers under HB 58.

LITTLE BEAR RIVER



Irrigation diversions on the South Fork Little Bear River in Cache County drive chronic summer dewatering. The watershed is 88% privately owned and heavily allocated.

Solutions:

- TU worked with a local rancher to install a more efficient irrigation system.
- In exchange, TU leased 0.3 cfs of senior water rights from the landowner during the irrigation season (May 1 to September 30) under HB 117.
- The water gained will stay in the stream for ~2 mi. downstream to the next point of diversion.

Challenges:

- The length of time to complete the lease.
- The need for a new lease when land and water rights switched owners.
- Only a 4-yr rather than a 10-yr lease due to ownership change.

CITATIONS

Endter-Wada, J., A. Hall, D. Jackson-Smith, and C. Flint. 2015. Utah's Water Future: Perspectives on Water Issues in Utah's Wasatch Range Metropolitan Area. Summary Report of Overall Findings from the iUTAH 2014 Household Survey. iUTAH Technical Report.

Szeptycki, L.F., Forgie, J., Hook, E., Lorick, K. and Womble, P., 2015. Environmental Water Rights Transfers: A Review of State Laws. Water in the West, Stanford University CA.